



LEGEND

SPECIFIED VALUES OF NUMBERED COMPONENTS

CONTROL CIRCUIT P.C. BOARD

C20	.022 MFD.	R20	500 Ω 1/4 W.
C21	.22 MFD.	R21	100 Ω
C22	.150 MFD.	R22	2.2 K Ω
C23	.047 MFD.	R23	270 Ω 1/4 W.
C24	100 MFD.	R24	15 K Ω
C25	33 MFD.	R25	10 Ω
C26	50 MFD.	R26	100 Ω
		R27	39 K Ω
		R28	1.8 K Ω
		R29	6.8 K Ω
		R30	1 K Ω
		R31	500 Ω 1/4 W.
		R32	3.9 K Ω
		R33	200 Ω 10 W.
		R34	1.5 K Ω 2 W.
		R36	1 K Ω 1/4 W.
		R37	330 Ω

D20 THRU D36 1 AMP
 DZ20 20 V.
 DZ21 6.2 V.
 TPI 50 V.
 Q20 1A 200V P.N.P.
 Q21 1A 200V P.N.P.
 SCR1 4 A. 400 V.
 SUS 2 N 4989
 F1 910 AMP SLOW BLOW FUSE

FOR CONTROL P.C. BOARDS L9208-1 OR HIGHER USE M17163-1 SCHEMATIC FOR COMPONENT VALUES AND CIRCUIT CONNECTIONS.

FIRING CIRCUIT P.C. BOARD

C40, C41, C42	.022 MFD	R40, R41, R42	430 Ω 4 W.
C43, C44, C45	4.7 MFD	R43, R44, R45	27 Ω
C46, C47, C48	.047 MFD	R46, R47, R48	150 Ω
C49, C50, C51	.047 MFD	R49, R50, R51	3.3 K Ω
C52, C53, C54	.1 MFD	R52, R53, R54	6.8 K Ω
C55, C56, C57	.022 MFD	R55, R56, R57	47 K Ω
C58, C59, C60	.22 MFD	R58, R59, R60	47 Ω
C61	.022 MFD	R61, R62, R63	1 K Ω
C62, C63, C64	2 MFD	R64, R65, R66	10 Ω
C65, C66, C67	50 MFD	R67, R68, R69	47 Ω
		R70, R71, R72	500 Ω 1/4 W.
		R73, R74, R75	100 K Ω 1/4 W.
		R76, R77, R78	270 Ω 4 W.
		R79, R80, R81	5.1 Ω
		R82, R83, R84	100 Ω
		R85, R86, R87	68 Ω 4 W.

D40 THRU D54 1 AMP
 DZ40, DZ41, DZ42 20 V. 1 W.
 Q40, Q41, Q42 2N 3393 N.P.N.
 Q43, Q44, Q45 UJT
 SCR1, SCR2, SCR3 4 A. 400 V.

NOT ON P.C. BOARDS

C1	.05 + .05 MFD	R1	50 Ω 50 W.
C2	.68 MFD.	R2	40 Ω 100 W.
C3	.68 MFD.	R3	10 K Ω 2 W.
C4	.68 MFD.	R4	50 Ω 25 W.
C5	1 MFD.	R5	270 Ω
		R6	47 Ω
		R7	47 Ω
		R8	47 Ω
		R9	27 Ω

CT1, CT2, CT3 CURRENT TRANS.
 L1 D.C. OUTPUT FILTER
 L2 FEEDBACK FILTER
 ICR INPUT STARTER
 SCR1 - D4 }
 SCR2 - D5 } HYBRID BRIDGE
 SCR3 - D6 }
 - D7 }
 SW1 POWER SWITCH
 SW2 MACH. REMOTE SWITCH
 SW3 DIAL SELECTOR SWITCH
 T1 MAIN TRANSFORMER
 T2 CONT. TRANSFORMER

A.N.S.I. ELECTRICAL SYMBOLS PER E-1537

NOTE: SINCE COMPONENTS OR CIRCUITRY ON A PRINTED CIRCUIT BOARD MAY CHANGE WITHOUT AFFECTING THE INTERCHANGEABILITY OF A COMPLETE BOARD, THIS DIAGRAM MAY NOT SHOW THE EXACT COMPONENTS OR CIRCUITRY OF CONTROLS HAVING A COMMON CODE NUMBER.

THE LINCOLN ELECTRIC CO. CLEVELAND, OHIO U.S.A.	CHG. No. 12/47/75 REV. 12/47/75 REV. 12/47/75 REV. 12/47/75 REV. 12/47/75	TYPE IDEALARC R3R-500 (SINGLE & DUAL VOLTAGES)	SUBJECT SCHEMATIC	DATE 7-20-78 SCALE	REV. 12/47/75	APP'D 080 (G-1482) WLP CLK	G-1484
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TO GROUND PER NATIONAL ELECTRICAL CODE

TO SUPPLY LINES

NOT PRESENT ON SINGLE VOLTAGE MACHINES ABOVE 400 V.

THIS LEAD IS NOT USED WHEN POLARITY SWITCH IS INSTALLED

L2 IS LOCATED NEAR POSITIVE OUTPUT TERMINAL ON OLDER MACHINES

CONNECTIONS FOR SINGLE VOLTAGE MACHINES ABOVE 400 V.

N.A. A DASH #2 IS STAMPED ON THE LAMINATION OF L2 NEAR THE COIL. THE SIDE OF L2 WITH THE DASH #2 MUST FACE THE HEAVY LEAD THAT CONNECTS TO THE POSITIVE STUD (OR POLARITY SWITCH, IF SO EQUIPPED).

THIS LEAD IS NOT USED WHEN POLARITY SWITCH IS INSTALLED

OPTIONAL POLARITY SWITCH (SHOWN IN D.C. + POSITION)

WORK TERMINAL ON MACHINES WITH POLARITY SWITCH

ARNC1178 AUSTRALIA 9-78

CANADA 8-78 FRANCE 9-78